THE DEEP SPACE NETWORK AND THE SQUARE KILOMETER ARRAY

G. M. Resch\* T. B. H. Kuiper J. G. Smith Jet Propulsion Laboratory

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The evolution of the NASA Deep Space Network is driven by the telecommunications needs of the current and future NASA spacecraft that are sent to explore the solar system. Undoubtedly, if the SKA existed and could operate at our telecommunications wavelengths (2.4, 8.4, and 32 GHz), there will be special situations in which the DSN would want to use the SKA. However, that kind of interest is impossible to predict and does not elicit strong support either politically or financially from NASA/DSN.

We will outline the way the DSN views its evolution in the coming decade, based largely on what it perceives to be the long range strategy for NASA missions. We will attempt to outline the strategy by which decisions are made and to speculate on the ways that the SKA can impact these decisions. Our objective is to begin a dialogue between the various developers of the SKA and DSN management that will make it possible for the DSN to be a partner in this enterprise rather than an interested spectator.

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- 1. (a)
  Tom Kuiper
  Jet Propulsion Laboratory
  Pasadena, CA 91109 USA
  kuiper@DSNra.JPL.NASA.gov
  - (b) 818-354-56235
  - (c) 818-354-8895
- 2. J
- 3. (a) Square Kilometer Array
- 4. I, Program chair: John Dreher
- 5. No special instructions

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